

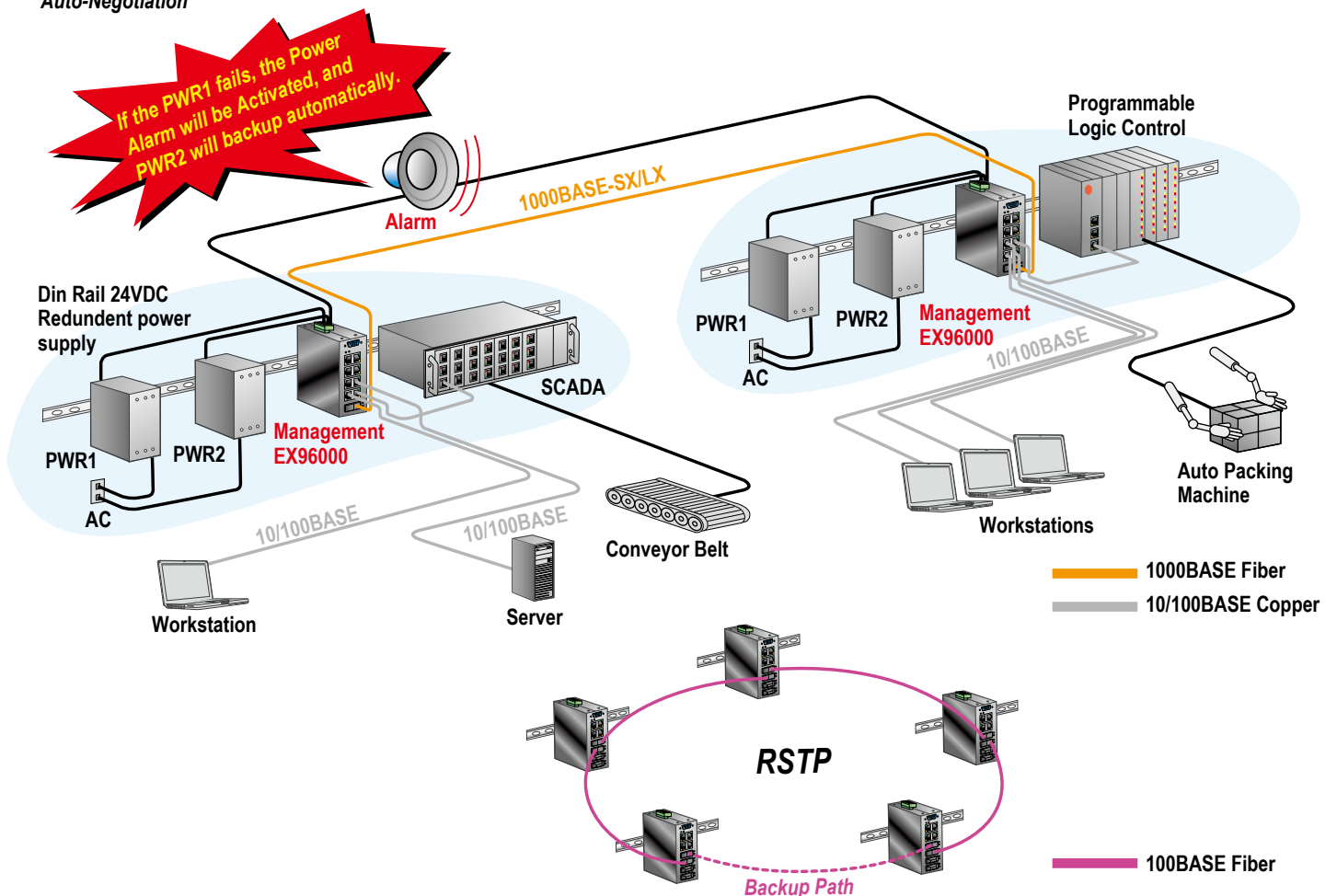
## EX96000 Series

The EX96000 series, managed, Ethernet switches are designed to operate in the harsh environments at the edge of the network. Whether on the factory floor or the street corner, the EX96000 will provide flawless communications when you need it most. The EX96000 is a managed switch with the flexibility of eight Ethernet ports that may be configured in various combinations of copper and fiber optic interfaces. To increase its flexibility a 9th port may be added that is a Gigabit Ethernet interface, configured with copper or fiber optics. Flexibility is the main feature of the EX96000, it may be DIN rail, shelf or wall mounted, and comes with power options to match the applications that require a tough, environmentally hardened, Ethernet switch.



### Key Features

- Meets NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- Meets IEC 61000-6-2 EMC Generic standard immunity for Industrial environment
- 4K MAC addresses
- 256K Bytes buffer memory
- Support 802.3/802.3u//802.3ab/802.3z/802.3x
- 1000M-Full-duplex, 10/100M-Full/Half-duplex, MDI/MDIX, Auto-Negotiation
- Gigabit fiber port
- Full wire-speed forwarding rate
- Back-pressure and IEEE 802.3x compliant flow control
- Alarms for power failure by relay output
- Redundant 1.5A 24VDC Power inputs or 3A 12VDC Jack
- Support DIN-Rail or Panel mounting installation



### Regulatory Approvals

■ **ISO:** Manufactured in an ISO9001 facility

■ **Safety:** UL 60950, EN 60950,  
IEC 60950, IEC 61000-6-2

■ **Emission Compliance:** FCC Part 15, Class A

■ **CE Approve:**

- EN55022 (CISR22 Class A)
- EN55024 (CISPR24 Class A)

■ **ESD Standards (IEC 61000-4-2)**

- Enclosure Contact: + / - 4KV; Criteria B
- Enclosure Air: + / - 8KV; Criteria B

■ **Radiated FRI Standards (IEC 61000-4-3)**

- Enclosure Ports: 10V/m, 80 to 1000MHz; Criteria A

■ **Burst Standards (IEC 61000-4-4)**

- Enclosure Ports: + / - 4KV @ 2.5KHz; Criteria B
- D.C. Power Ports: + / - 4KV; Criteria B
- A.C. Power Ports: + / - 4KV; Criteria B

■ **Surge Standards (IEC 61000-4-5)**

- Signal Ports: + / - 1KV Line-to-earth; Criteria B
- D.C. Power Ports: + / - 0.5KV Line-to-earth; Criteria B
- A.C. Power Ports: + / - 2KV; Line-to-earth; Criteria B

■ **Induced RFI Standards (IEC 61000-4-6)**

- Signal Ports: 10V @ 0.15 - 80MHz; Criteria A
- D.C. Power Ports: 10V @ 0.15 - 80MHz; Criteria A
- A.C. Power Ports: 10V @ 0.15 - 80MHz; Criteria A
- Earth Ground Ports: 10V @ 0.15 - 80MHz; Criteria A

■ **Magnetic Field Standards (IEC 61000-4-8)**

- Enclosure Ports: 30A/m @ 50, 60Hz; Criteria A

■ **Voltage Dip Standards (IEC 61000-4-11)**

- A.C. Power Ports: 30% Reduction for 0.5 period; Criteria B

■ **Environmental Test Compliance:**

- (IEC 60068-2-6) Vibration Resistance: 5G @ 150Hz; Criterion 3  
(Operation/Storage/Transport)
- (IEC 60068-2-27) Shock: 25G @ 11ms (Half-Sine Shock Pulse; Operation)  
50G @ 11ms (Half-Sine Shock Pulse; Storage/Transport)
- (IEC 60068-2-32) Free Fall: 1M (3.281ft.)

■ **NEMA TS1/2 Environmental requirements for traffic control equipment**

### Technical & Physical Specifications

■ **Management Support:**

- IEEE 802.1Q VLAN Tagging
- 4 port trunking groups with up to 2~4 ports per group
- Packet Filtering and Port Security  
Destination MAC  
Static MAC address not subject to aging  
Secure mode freezes MAC address learning  
(each port may independently use this mode)
- IEEE 802.1p QoS  
Classification based on:  
Port based priority  
VLAN Priority field in VLAN tagged frame  
DS/TOS field in IP packet  
UDP/TCP logical ports: 8 hard-wired and 8 programmable  
ports, including one programmable range
- IEEE 802.1w Rapid Spanning Tree Algorithm
- IP Multicast Filtering through IGMP Snooping
- Rate Control  
Down to 16kbps Rate Control granularity
- RS-232 console, Telnet, SNMP v1 & v2, RMON, Web  
Browser, and TFTP Management
- MIB Statistics counters for all ports

■ **LED Indicators:**

Per Unit: Power Status (PWR1, PWR2)  
Per Port: LNK/ACT, Green for 10/100TX or 100FX  
100, Yellow for 10/100TX or 100FX  
1000, Green for 1000Base (8+1G)  
ACT, Yellow for 1000Base (8+1G)

■ **Ethernet Standards:**

IEEE 802.3 10Base-T  
IEEE 802.3u 100Base-TX, IEEE 802.3u 100Base-FX  
IEEE 802.3ab 1000Base-T  
IEEE 802.3z 1000Base-SX, 1000Base-LX

■ **Switching Methods:** Store-and-Forward

■ **Forwarding Rate:**

14,880pps for 10Mbps, 148,810pps for 100Mbps, 1,488,100pps for 1000Mbps

■ **Power Supply Options:**

External Universal PSU, Input 100 - 240VAC 50 - 60Hz, Output 12VDC @ 3A  
DC Power Jack: 12VDC, 2A Max.  
Terminal Block: 24VDC, 1A Max., 10 - 30VDC

■ **Power Consumption:**

12VDC @ 1.48A, 24VDC @ 0.77A, 18.48W Max.

■ **Environmental:**

Operating Temperature: - 34°C to 74°C (-29°F ~ 165°F)  
Storage Temperature: - 40°C to 85°C (-40°F ~ 185°F)  
Humidity: 10% to 95% Non-Condensing

■ **Mechanical:**

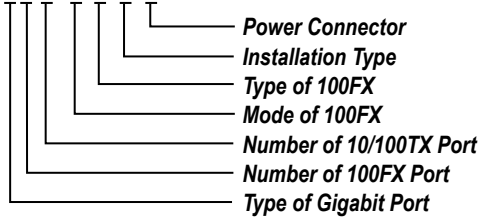
Dimensions: 135mm (W) x 125mm (D) x 50mm (H) (5.31" (W) x 4.92" (D) x 1.97" (H))  
Net weight: 0.8Kg (1.76lbs.)

Designation	Typical Distance *	Nominal Wavelength	Cable Type	Connector	Optical Budget
1000Base-SX	220 m	850 nm	62.5/125 MM	SC	7.5 dB
1000Base-SX	550 m	850 nm	50/125 MM	SC	7.5 dB
1000Base-LX	10 km	1310 nm	10/125 SM	SC	10 dB
1000Base-LX	20 km	1310 nm	10/125 SM	SC	15 dB
100Base-FX	2 km	1310 nm	62.5/125 MM	ST	15 dB
100Base-FX	2 km	1310 nm	62.5/125 MM	SC	15 dB
100Base-FX	20 km	1310 nm	10/125 SM	ST	19 dB
100Base-FX	20 km	1310 nm	10/125 SM	SC	19 dB
100Base-FX	40 km	1310 nm	10/125 SM	ST	30 dB
100Base-FX	40 km	1310 nm	10/125 SM	SC	30 dB
10Base-T	100 m	N/A	N/A	RJ-45	N/A
100Base-TX	100 m	N/A	N/A	RJ-45	N/A
1000Base-T	100 m	N/A	N/A	RJ-45	N/A

### Ordering Information

#### EX96000 Ordering Model Number

EX96G F T - M C - I - P



Type of Gigabit Port	0 No Gigabit Port 2 10/100/1000TX 3 1000SX 4 1000LX-10KM 5 1000LX-20KM
Number of 100FX Port	0 No 100FX Port 1 1 Port 100FX Port 2 2 Port 100FX Port 4 4 Port 100FX Port
Number of 10/100TX Port	4 4 Port 10/100TX Port 6 6 Port 10/100TX Port 8 8 Port 10/100TX Port
Mode of 100FX	0 No 100FX Port 1 Multi Mode 100FX 2 Single Mode 100FX
Type of 100FX (Multi Mode)	0 No 100FX Multi Mode A 100FX (SC) B 100FX (ST) C 100FX (VF-45) D 100FX (MT-RJ)
Type of 100FX (Single Mode)	0 No 100FX Single Mode A 100FX (SC)-20KM B 100FX (SC)-40KM C 100FX (SC)-75KM D 100FX (ST)-20KM E 100FX (WDM)-TX1310nm:RX1550nm-20KM F 100FX (WDM)-TX1310nm:RX1550nm-40KM G 100FX (WDM)-TX1550nm:RX1310nm-20KM H 100FX (WDM)-TX1550nm:RX1310nm-40KM
Installation Type	1 DIN-Rail ## 2 Desk Top
Power Connector	A Terminal Block * B DC Jack **

#### Power Connector Options:

\* **Options A** - The Terminal Block option does not include an external Power supply.

Please order the following part numbers, as required:

[EX-DR-30-24](#), [EX-DR-60-24](#), [EX-DR-75-24](#), or [EX-DR-120-24](#)

See data sheets for DIN Rail power supplies for full specifications.

\*\* **Option B** - The external power adapter and power cord are not included with the switch. Please order the following part number: [41-136044-1](#) for USA

[41-136044-2](#) for EU

[41-136044-3](#) for UK

[41-136044-4](#) for AU

[41-136044-5](#) for JP

**Installation Type ##** - DIN Rail mount is included.

Optional Panel Mount Bracket, ordered separately, part number: [64-AA96000-480](#)

#### 41-136044

- AC/DC power adapter with aluminum case;
- Power input: 90 ~ 264VAC, 47 ~ 63Hz;
- Output power: 36W, 12VDC, 0 ~ 3A;
- DC power connector with latch



#### 64-AA96000-480

- Stainless steel industrial panel mounting plate.

